

HOSPITALS FOR RURAL PEOPLE IN OHIO

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TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION.....	1
II	REGISTERED HOSPITALS IN OHIO.....	4
III	GENERAL AND SPECIAL HOSPITALS.....	12
IV	GENERAL HOSPITAL SERVICE AREAS.....	20
V	PLANNING GENERAL HOSPITALS FOR RURAL PEOPLE.....	24

HOSPITALS FOR RURAL PEOPLE

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I INTRODUCTION

The modern hospital performs a most important function both for those who receive medical, surgical, and other health services and for those who furnish those services. When well designed, adequately equipped, and staffed with highly trained technicians the hospital is a weapon for attacking sickness needs and is also a powerful potential force for promoting health in the area it serves.

Because good hospitals play such important roles in the distribution of medical care and in determining the quantity and quality of health services, rural people are becoming more and more concerned with hospital problems. This report has been prepared in response to many inquiries concerning the present hospital situation in Ohio and concerning current trends in rural hospital planning. It is doubtful whether the small rural hospital can effectively serve the hospital needs of the country so long as it remains an isolated institution cut off from service connections with larger medical centers in the cities. Present trends point toward regional organizations of hospitals and hospital services to serve both rural and urban populations. Because of this fact the analysis in this report includes all Ohio hospitals whether located in large or in small centers of population.

What Is A Hospital?

The term "hospital" is used in a broad sense to include a wide variety of institutions devoted to the care of the sick, the injured and others who require medical, surgical, nursing, or other care outside their homes. Such institutions are extremely diversified from the standpoint of size, organization, type of service rendered, and from the standpoint of the quality of service provided. In general, it may be said that a hospital is an institution for the care of the bedridden sick, the injured, the maternity patient, and of those patients whose condition requires special professional and custodial service. Some hospitals provide care for only one type of illness. Such are hospitals for mental diseases, for epilepsy, for tuberculosis, for crippled persons, or for convalescents. Others receive only certain categories of persons. Such are children's hospitals, maternity hospitals, industrial hospitals or infirmaries for inmates of prisons, reformatories, old people's homes, or orphanages.

Great emphasis is now being placed on the work of the general hospital, which usually serves those suffering acute illnesses or conditions requiring bed care. Such institutions generally draw their patients from a fairly restricted area and are often considered community hospitals. Modern planning now visions these general hospitals as medical and health centers. In such a center physicians and specialists are mobilized into an efficient hospital staff. The staff is provided with medical tools and equipment, with a place to work, and with skilled nursing and technical assistance. Such a center may not limit its service to the bedridden sick who require hospitalization. Outpatient service may be provided for persons who do not require bed care but who do need diagnostic and treatment services beyond those available in their homes or in the individual doctor's office.

Functions of hospitals. Hospitals may best be described in terms of the more detailed functions they perform. Such functions are many and are

continually being expanded. These functions may be outlined as follows:

1. Hospitals provide bed care for acute illnesses. These include
 - a. Care for acute medical and surgical emergencies
 - b. Care for patients with minor illnesses but for whom home nursing cannot be arranged
 - c. Care for maternity cases as more and more births are hospitalized
 - d. Care for persons suffering from acute contagious diseases for which isolation is required to avoid spread of the contagion
2. Hospitals provide outpatient, or clinical service for the minor sick. Such service has, however, been limited largely to large city hospitals, and to persons who are too poor to pay for their medical care. Small rural hospitals have not generally provided outpatient service largely due to lack of trained medical specialists on the hospital staff. The clinic department of the hospital generally serves two types of patients:
 - a. Those who need specialist services or advice and who are referred to the clinic by the family doctor for diagnosis
 - b. Those who need treatment for special diseases or conditions beyond the scope of the family doctor. Such conditions include tuberculosis, venereal disease, fractures, diabetes, and mental disease.

It has been suggested that clinics in rural areas might be staffed with visiting specialists from large city hospitals. Such clinics might be held on a regular periodic schedule or as upon demand for such a clinic.

3. Hospitals centralize and coordinate the services of professional personnel, including general practitioners, medical specialists and consultants, nurses, technicians, and other health workers. The hospital serving as a health center gives all medical doctors the opportunity to practice the best medicine of which they are capable. Through staff membership and staff conferences they have the opportunity to pool their knowledge and their skills and to grow professionally. The health center may further provide for a closer linkage between curative and preventive practices by bringing about a close association between private practitioners and public health department personnel.
4. Hospitals centralize diagnostic and treatment equipment necessary in modern medical practice. Much of the modern equipment found in the best hospitals is too expensive for the average physician to install in his private office. Moreover, use of such equipment often requires the service of specialists. An adequate pathological laboratory requires the services of a pathologist, and first rate X-ray services require a radiologist.
5. Hospitals provide homes and special treatment services for chronic and long-stay patients. Such patients include the tubercular, the mentally ill, the mentally deficient, the epileptic, and the crippled.
6. Many hospitals serve important educational functions. There are teaching hospitals which serve as educational institutions for

training members of the medical, dental, nursing, and allied professions, and for the training of skilled technicians. In the future the hospitals which serve as health centers should do much in providing sound health education for the general public.

7. Finally there are certain hospitals which promote the advancement of medical knowledge through research.

Specific Aims of This Report

As has been stated above the general purpose of this report is to set forth the results of a study of the present hospital situation in Ohio and of trends in rural hospital planning. The more detailed aims may be summarized as follows:

1. To describe the nature of modern hospitals and to give a better understanding of what hospitals are, what they are supposed to do, and of the important place they occupy in modern life.
2. To describe the general hospital services in Ohio with a view to providing valuable background information for rural and other groups interested in post-war planning of hospital services for rural people.
3. To show for different types of hospitals, their total bed capacity, and the utilization of hospital beds during 1943.
4. To describe Ohio hospitals in terms of the types of services which they render bed patients.
5. To show the kinds of agencies which own and control Ohio hospitals.
6. To inquire into the size of general hospitals.
7. To show the location of general and special hospitals.
8. To show the relation between population and hospital beds in tentatively outlined hospital service areas.
9. To state some assumptions for future rural hospital planning.

Source of Data

The main source of data for this report has been the "Twenty-third Annual Presentation of Hospital Data by the Council on Medical Education and Hospitals of the American Medical Association." This data was published in The Journal of the AMA, Hospital Number, issued March 25, 1944. In determining hospital service areas use was made of hospital news published in newspapers in cities and towns where hospitals are located. Newspaper files available at the Ohio Historical Museum were used for this purpose. For many hospitals the daily or weekly news notes included the names and addresses of patients admitted or discharged. It was possible to locate those addresses on a large map of Ohio, and thus determine the general area served by hospitals in a particular place.

II REGISTERED HOSPITALS IN OHIO

In 1943 there were in Ohio a total of 236 hospitals of all types which were registered by the American Medical Association Council on Medical Education and Hospitals. This does not include some hospitals which upon investigation by the AMA Council were found unsatisfactory for admission to its registry.

Registration is extended by the AMA Council only to those hospitals and related institutions for which there is no evidence of irregular or unsafe practices.

For 235 of these hospitals detailed information was given in the 1943 hospital census for Ohio. Data was lacking only for one newly established governmental hospital for military personnel.

The 235 registered hospitals for which information was available contained a total of 58,224 beds, not including bassinets which numbered 3,608. They had an average daily census of 50,776 patients not including newborn infants during 1943. To these beds a total of 602,425 patients were admitted during the year (Table 1). When these figures are related to the total population of Ohio in 1940 the results are interesting. There were 8.4 hospital beds of all types for each 1,000 people, and on the average day there were 7.4 beds occupied for each 1,000 people in the State. The number of admissions to these institutions amounted to 8.7 percent of the total population of Ohio in 1940. The figures indicate a high rate of utilization of hospitals by patients seeking bed care for on the average day of 1943 a little more than 87 percent of all beds in registered hospitals in Ohio were occupied.

Type of Service

As has been indicated hospitals are not all alike. One important way in which they differ is in the type of service provided. When the average person thinks of a hospital he is apt to think of the general hospital for it is there that the person goes when he is acutely ill, when he gets pneumonia or appendicitis or when he breaks a leg. Maternity patients also go usually to the general hospital unless there is available a special maternity hospital. There are other special hospitals including those for contagious diseases, children's hospitals, convalescent and rest homes, orthopedic hospitals especially for crippled children, and industrial hospitals, which serve the workers of a given factory or industry.

In addition to the general and special hospitals there are those for nervous and mental conditions, tuberculosis hospitals and hospital departments of institutions of various types (institutional hospitals).

Of the 235 hospitals registered in 1943 nearly three-fourths, 73.6 percent, were general and special hospitals, 10.2 percent were mental institutions, 9.4 percent were tuberculosis sanatoria, and 6.8 percent were hospital departments of institutions. The mental institutions which comprised only 10.2 percent of all registered hospitals contained 52.3 percent of all beds, and contained 58.0 percent of the average daily census of bed patients hospitalized in Ohio. The general and special hospitals accounted for 39.9 percent of all beds and 35.4 percent of all bed patients in the average daily count. Tuberculosis hospitals had 5.7 percent of the beds, and 5.4 percent of the patients, while the institutional hospitals had 2.1 percent of all beds and 1.1 percent of all patients.

TABLE 1. REGISTERED HOSPITALS BY TYPE OF SERVICE, OHIO, 1943

Type of Service	Hospitals	Beds	Average Census	Patients Admitted
Total	235	58,224	50,776	602,425
Nervous and mental	24	30,469	29,474	8,570
Mental disease	20	22,721	21,897	7,888
Mental deficiency	3	5,626	5,588	513
Epilepsy	1	2,122	1,989	169
General and special	173	23,191	17,981	579,198
General	149	21,349	16,566	557,322
Federal ^{1/}	6	1,835	1,377	12,787
Others	143	19,514	15,189	544,535
Special	24	1,842	1,415	21,876
Convalescent	7	616	560	1,147
Children's	3	450	319	13,398
Maternity	7	279	184	5,607
Orthopedic	3	128	77	211
Others	4	369	275	1,513
Tuberculosis	22	3,317	2,750	3,400
Institutional	16	1,247	571	11,257

Percent

Total	100.0	100.0	100.0	100.0
Nervous and mental	10.2	52.3	58.0	1.4
Mental disease	8.5	39.0	43.1	1.3
Mental deficiency	1.3	9.7	11.0	0.1
Epilepsy	0.4	3.6	3.9	0.0
General and special	73.6	39.9	35.4	96.1
General	63.4	36.7	32.6	92.5
Federal ^{1/}	2.5	3.2	2.7	2.1
Others	60.9	33.5	29.9	90.4
Special	10.2	3.2	2.8	3.6
Convalescent	3.0	1.1	1.1	0.2
Children's	1.3	0.8	0.6	2.2
Maternity	3.0	0.5	0.4	0.9
Orthopedic	1.3	0.2	0.2	0.0
Others	1.7	0.6	0.5	0.3
Tuberculosis	9.4	5.7	5.4	0.6
Institutional	6.8	2.1	1.1	1.9

Source: Journal American Medical Association. Hospital Number.
Volume 124, No. 13. March 1944. Pages 839 - 922.

^{1/} Does not include the Fletcher General Hospital at Cambridge, O.

Because general and special hospitals serve mostly the acutely ill and maternity patients who stay only a short time their annual turnover is very great. It is notable that 96.1 percent of all the 602,425 patients admitted as bed patients in Ohio during 1943 were received by the general and special hospitals (Table 1).

Type of Ownership or Control

Hospitals are owned and controlled by governmental or by non-governmental agencies. The governmental hospitals are maintained by federal, state, county or city units of government. Their capital costs are usually met through taxation. Their operating costs are usually financed by public funds, by private gifts and by patients' fees.

Most non-governmental hospitals are operated under the auspices of churches, and of non-profit associations organized specifically for hospital purposes. Some, however, are proprietary hospitals operated by individuals, partnerships, or corporations for profit. The non-governmental institutions are sometimes called voluntary hospitals. The non-profit groups usually get their funds from church and fraternal groups, from private gifts and endowments, from community, or war chest funds, from patients' fees, and from public funds provided for hospitalization of indigents. The proprietary, or profit, hospitals usually obtain their funds through business loans and from patients' fees.

Of the 235 registered hospitals of all types in Ohio in 1943 about one-third (32.8 percent) were governmental, and these controlled 70.3 percent of all beds. About 28 percent of all beds were found in hospitals operated by non-profit organizations including churches and non-profit associations. Only 1.6 percent of all beds were in proprietary hospitals. It was notable that 80.4 percent of all patients admitted during 1943 were admitted to the voluntary non-profit hospitals, which controlled most of the hospitals for short-stay patients (Table 2).

Mental hospitals. The registered mental hospitals included 20 for the mentally ill, 3 for the mentally deficient, and 1 for the epileptic. These institutions together contained more beds than did all other types of hospitals combined. In actual numbers, they had 30,469 beds and an average daily count of 29,474 patients within their walls, the available beds being nearly 97 percent filled on the average day. That was 4.4 beds and 4.3 patients for 1,000 people in Ohio in 1940. Throughout the year a total of 8,570 patients were admitted. That was 29 admissions per 100 persons in average daily residence in the institutions and 124 admissions annually for each 100,000 people in the State in 1940 (Table 1).

Hospitalization for the mentally ill, mentally deficient, and epileptic is primarily a responsibility of the government. In 1943, 93.1 percent of all hospitalized mental patients were in State maintained institutions, and an additional 5.4 percent were in a federal hospital devoted largely to the care of mental casualties of the first world war. There were 8 proprietary mental hospitals and 2 non-profit association hospitals for mental patients registered in Ohio. These non-governmental institutions together had only 568 beds, but they admitted 3,135 patients for treatment during 1943. These non-governmental hospitals are devoted mainly to the treatment of patients with minor types of mental and nervous illnesses who do not receive long-time custodial care. Because the persons admitted are largely short-stay patients their annual turnover is very much greater than in the governmental

TABLE 2. REGISTERED HOSPITALS BY TYPE OF OWNERSHIP OR CONTROL, OHIO, 1943

Ownership or Control	Hospitals	Beds	Average Census	Patients Admitted
All hospitals	235	58,224	50,776	602,425
Governmental	77	40,915	37,094	109,999
State	23	29,551	28,022	21,411
City	20	4,179	3,178	58,889
County	26	3,668	2,862	14,128
Federal	8	3,517	3,032	15,571
Non-profit organization	138	16,382	13,037	484,787
Non-profit association	94	8,865	6,733	256,229
Church	44	7,517	6,304	228,558
Proprietary	20	927	645	7,639
Ind. or Part.	11	387	241	5,136
Corporation	9	540	404	2,503

Percent

All hospitals	100.0	100.0	100.0	100.0
Governmental	32.8	70.3	73.0	18.3
State	9.8	50.8	55.1	3.6
City	8.5	7.2	6.3	9.8
County	11.1	6.3	5.6	2.3
Federal	3.4	6.0	6.0	2.6
Non-profit organization	58.7	28.1	25.7	80.4
Non-profit association	40.0	15.2	13.3	42.5
Church	18.7	12.9	12.4	37.9
Proprietary	8.5	1.6	1.3	1.3
Ind. or Part.	4.7	0.7	0.5	0.9
Corporation	3.8	0.9	0.8	0.4

Source: Journal American Medical Association. Hospital Number.
Volume 124, No. 13. March 1944. Pages 839 - 922.

hospitals. In 1943 there were about 7 admissions to these non-governmental hospitals for mental illnesses for each patient in the average daily census and 36.6 percent of all patients admitted for mental conditions were received by these institutions. By way of contrast, the average census of patients in the governmental institutions far outnumbered the annual admissions due to the long stay of those admitted (Table 3).

TABLE 3. REGISTERED MENTAL HOSPITALS BY TYPE OF OWNERSHIP OR CONTROL, OHIO, 1943

Ownership or Control	Hospitals	Beds	Average Census	Patients Admitted
Total	24	30,469	29,474	8,570
Governmental	14	29,901	29,019	5,435
State	13	28,289	27,419	4,742
Federal	1	1,612	1,600	693
Proprietary	8	383	300	1,844
Non-profit association	2	185	155	1,291

Percent

Total	100.0	100.0	100.0
Governmental	98.1	98.5	63.4
State	92.8	93.1	55.3
Federal	5.3	5.4	8.1
Proprietary	1.3	1.0	21.5
Non-profit association	0.6	0.5	15.1

Source: Journal American Medical Association. Hospital Number. Volume 124, No. 13. March 1944. Pages 839 - 922.

While the hospitals for mental patients contain the majority of all beds in registered hospitals still the present accommodations for such patients are far from adequate. An average occupancy rate of nearly 97 percent of all beds is evidence of overcrowding. Moreover, it is known that the institutions maintained by the State for mental patients are furnished with more beds than their normal bed capacity allows for. A recent Report of the Governor's Committee on the Mental Health Program for Ohio stresses the inadequacy of accommodations for the mentally ill, the epileptic and the mentally deficient and recommends a comprehensive mental health program. That report shows a normal bed capacity of 23,700 beds in the State operated institutions for three classes of mental patients. Yet the AMA report shows an actual census of 28,289 beds in these state maintained institutions in 1943. The Governor's Committee recommended that the bed capacity in the State institutions be increased to a total of from 48,400 to 53,400 during the next ten years as compared to the present normal capacity of only 23,700.

General and special hospitals. General hospitals furnish bed space devoted largely to patients suffering from acute medical and surgical emergencies, to maternity cases, and to other illness for which home care cannot be arranged, or which require the service of medical specialists. The special hospitals render services restricted to those specialties closely allied with medicine and surgery. They include convalescent and rest homes, children's hospitals, maternity hospitals, and orthopedic hospitals. These special hospitals are here classified with the general ones because the

specialized services which they offer are usually provided by general hospitals, and because both groups usually serve fairly restricted local areas.

The best of these general hospitals serve other functions, however, than merely housing the sick and providing well equipped workshops for individual medical doctors. They are or should be community health centers where the medical services of the community are concentrated and integrated. They serve to attract superior medical and related personnel to the community. They maintain and improve the quality of medical care and health services. Directly or indirectly they serve the health needs of those who are not hospitalized as well as the relatively few who require bed care.

The 1943 register of hospitals published by the American Medical Association lists a total of 173 general and special hospitals in Ohio. Their combined bed capacity was 23,191 or 3.4 beds per 1,000 population. The average daily census of patients was 17,981, 77.5 percent of all beds being occupied on the average during 1943. Since the bed patients in general and special hospitals are usually comprised of the acutely ill and of maternity patients the average length of stay is relatively short $\frac{1}{2}$. This permits the institution to care for many different individuals during the course of a year. During 1943 the registered general and special hospitals in Ohio admitted a grand total of 579,198 patients, including more than 100,000 maternity cases. The rapid rate of patient turnover in these institutions is indicated by the fact that during the year there were 25 admissions per bed, and 32 admissions for each bed occupied on the average day (Table 1).

The special hospitals numbered 24 and included 7 operated especially for convalescents and others requiring nursing care outside their own homes, 7 maternity hospitals, 3 children's hospitals, 3 hospitals for crippled children, 1 industrial, 1 goitre, 1 chronic cancer, and 1 isolation hospital. These special institutions had a combined capacity of 1,842 beds and had an average daily census of 1,415 patients. During the year they admitted a total of 21,876 patients, the majority of these being admissions to the 3 children's hospitals.

With the exception of a small goitre hospital in Wood County, all of these special institutions were located in one or another of the large cities in Ohio.

Almost one-half (48.6 percent) of all registered general and special hospitals in Ohio were operated under the auspices of non-profit hospital associations. An additional one-fourth (25.4 percent) were controlled by church and related groups. In other words, nearly 3 of each 4 were owned and controlled by non-governmental and non-profit organizations. These voluntary non-profit hospitals controlled 68.3 percent of the bed capacity in general and special hospitals, and had 70.6 percent of the average daily census of patients in such hospitals. Of all patients admitted to hospitals of this type 82.9 percent were received by these voluntary non-profit institutions.

Among the general and special hospitals there were 35 operated by various levels of government, federal, state, and local. Of the 7,028 beds in these governmental hospitals more than one-half were found in 18 city operated

1/ The average length of stay in all general hospitals throughout the United States in 1943 was 13 days, but was 19 days in governmental hospitals, 10 days in the non-profit organization hospitals and only 8 days in proprietary hospitals.

institutions. There were only 10 proprietary general and special hospitals and these were mostly small averaging only about 33 beds and 13 patients each (Table 4).

TABLE 4. REGISTERED GENERAL AND SPECIAL HOSPITALS BY TYPE OF OWNERSHIP OR CONTROL, OHIO, 1943

Ownership or Control	Hospitals	Beds	Average Census	Patients Admitted
Total	173	23,191	17,931	579,198
Non-profit association	84	8,313	6,403	252,192
Church related	44	7,517	6,304	228,558
Governmental	35	7,023	5,092	92,873
Federal ^{1/}	6	1,835	1,403	13,731
State	2	432	301	9,203
County	9	1,187	797	11,578
City	18	3,574	2,591	58,311
Proprietary	10	333	182	5,575

Percent

Total	100.0	100.0	100.0	100.0
Non-profit association	48.6	35.9	35.5	43.4
Church related	25.4	32.4	35.1	39.5
Governmental	20.2	30.3	28.3	16.1
Federal ^{1/}	3.4	7.9	7.8	2.4
State	1.2	1.9	1.7	1.6
County	5.2	5.1	4.4	2.0
City	10.4	15.4	14.4	10.1
Proprietary	5.8	1.4	1.1	1.0

Source: Journal American Medical Association. Hospital Number. Volume 124, No. 13. March 1944. Pages 839 - 922.

^{1/} Does not include the Fletcher General Hospital at Cambridge, O.

Tuberculosis hospitals. Registered tuberculosis hospitals of which there were 22 in Ohio in 1943, contained 3,317 beds for persons suffering from that disease. That was 4.8 beds per 10,000 population of the State in 1940 and 119 beds per 100 deaths from tuberculosis in 1943. These institutions had an average daily census of 2,750 which means an average daily occupancy of 82.9 percent of the beds. During the year 3,400 patients were admitted (Table 1).

The maintenance of tuberculosis hospitals is, like mental institutions, primarily a responsibility of the tax-paying public. Of the 22 tuberculosis hospitals in Ohio 18 were operating under the control of governmental units. Sixteen of these were operated by county governments, 1 by the City of Cleveland, and one by the State, about 90 percent of the beds were in the governmental hospitals. The other 10 percent were in 2 non-profit association operated institutions one of which was operated by an individual and the other by a corporation (Table 5).

Hospital Departments of Institutions. Institutional hospitals include infirmary units of prisons, reformatories, industrial schools, homes for the aged, orphanages and colleges. These differ from general hospitals by virtue

of the fact that they serve only the residents of the institutions and not those in the general community.

TABLE 5. REGISTERED TUBERCULOSIS HOSPITALS BY TYPE OF OWNERSHIP OR CONTROL, OHIO, 1943

Ownership or Control	Hospitals	Beds	Average Census	Patients Admitted
Total	22	3,317	2,750	3,400
Governmental	18	2,976	2,510	3,040
County	16	2,356	1,953	2,407
City	1	435	425	386
State	1	185	132	247
Non-profit association	2	130	77	140
Proprietary	2	211	163	220

Percent

Total	100.0	100.0	100.0
Governmental	89.7	91.3	89.4
County	71.0	71.0	70.7
City	13.1	15.5	11.4
State	5.6	4.8	7.3
Non-profit association	3.9	2.8	4.1
Proprietary	6.4	5.9	6.5

Source: Journal American Medical Association. Hospital Number. Volume 124, No. 13. March 1944. Pages 839 - 922.

There were 16 institutions in Ohio in 1943 which had hospital departments registered by the American Medical Association. Of these, 10 were in governmental institutions and the other 6 were in institutions operated by non-profit associations. Together they had a bed capacity of 1,247, but had an average daily census of only 571 patients. During the year, however, they admitted 11,257 persons for bed care (Table 1).

III GENERAL AND SPECIAL HOSPITALS

The size of the hospital measured in terms of bed capacity is an important consideration because there is a very close relation between size and the quality of service provided by the institution. The larger hospitals generally provide more complete services, and such hospitals are usually located in the bigger cities, rather in the more rural areas.

Distribution by Size

The registered general and special hospitals averaged about 134 beds each, but they varied greatly in size. There were 20 very small hospitals, 11.6 percent of the total, which had less than 25 beds each. There were 38 small hospitals comprising 21.9 percent of the total with from 25 to 50 beds each. At the opposite extreme were 39 very large hospitals each having 200 or more beds each, and 33 large hospitals having between 100 and 200 beds each. These large and very large institutions together comprised 41.6 percent of all registered general and special hospitals in Ohio (Table 6).

TABLE 6. REGISTERED GENERAL AND SPECIAL HOSPITALS
CLASSIFIED BY NUMBER OF BEDS, OHIO, 1943

Number of Beds	Number of Hospitals	Percent of Hospitals
Total	173	100.0
Less than 25 beds	20	11.6
25 - 49 beds	38	21.9
50 - 74 beds	34	19.7
75 - 99 beds	9	5.2
100-199 beds	33	19.1
200 and over	39	22.5

Source: Journal American Medical Association. Hospital Number.
Volume 124, No. 13. March 1944. Pages 839 - 922.

The federal hospitals were larger on the average than were those controlled by other agencies, governmental or non-governmental. Those general hospitals maintained by the federal government in Ohio had on the average 306 beds. The average for the State controlled general hospitals was 216 beds, and city hospitals averaged 199 beds each. County hospitals were smaller, averaging 132 beds each (Table 7).

TABLE 7. SIZE AND UTILIZATION OF REGISTERED GENERAL
AND SPECIAL HOSPITALS BY TYPE OF CONTROL, OHIO, 1943

Ownership or Control	Average Number of Beds	Percent of Beds Occupied	Admissions per Occu- pied Beds
Total	134	77.5	32
Non-profit associations	99	77.0	39
Church related	171	83.9	36
Governmental	201	72.5	18
Federal	306	76.5	1
State	216	69.7	31
County	132	67.1	15
City	199	72.5	23
Proprietary	33	54.7	31

Source: Table 4.

Among the non-governmental general and special hospitals those operated as proprietary institutions were smallest, averaging only 33 beds each. Of those operated by non-profit organizations, those under church auspices were much larger on the average than were those operated by non-profit hospital associations the mean number of beds being 171 and 99 respectively in these institutions (Table 7).

Utilization of Services

Hospitals maintain records of the number of bed patients admitted and discharged daily. These figures provide the basis for annual cumulations and for the computation of average daily occupancy, the standard index of hospitalization utilization. From statistics published in the 1943 census of hospitals it is possible to obtain figures showing the average number of beds occupied (average census) and to express this average as a percentage of normal capacity, that is, the percentage of all beds occupied on the average day during a year. This percentage of beds occupied furnished a check on the adequacy of hospital accommodations to meet the demands for bed service.

In 1943 the 173 general and special hospitals of Ohio contained 23,191 beds and had an average occupancy of 17,981 patients. In other words, the average daily occupancy was 77.5 percent of capacity. This occupancy rate differed according to type of hospital control. It was highest in the church related hospitals in which 83.9 percent of all beds were occupied. The occupancy rate in the non-profit association institutions was 77.0 percent, and in the governmental institutions it was 72.5 percent. The occupancy rate in the county general hospitals was, however, only 67.1 percent of capacity (Table 7).

Hospitals are not expected to have all beds occupied each day of the year. Even an approach to such a high rate of occupancy would as a matter of fact, constitute extremely serious overcrowding. A hospital is necessarily compartmentalized to care for different types of patients in separate quarters. Even in the small hospital separate quarters are needed for men, women, infants, children, and for maternity patients. Hence, there is often serious overcrowding in some sections of the hospital when the total occupancy rate appears reasonably low. In the same year, however, total occupancy varies from month to month and the hospital must maintain a comfortable margin of reserve to meet peak seasonal needs and to be prepared for emergencies. Hospital authorities assert that an occupancy rate of 65 percent is normal for the small general hospital of 50 or so beds, while the large city hospital can get along well with an average occupancy of 80 percent. Figures much above these for general hospitals are apt to be indicative of overcrowding, at least at some times and in some departments.

Another index of hospital utilization is the annual patient turnover, that is, the number of admissions during the year per patient in the average daily census. Such an index reflects the average length of time that patients stay in the hospital, a high rate indicating short periods of hospitalization, and low rates indicating long periods.

For all general and special hospitals combined there were 32 admissions for each patient in the average daily count in 1943. This turnover rate was highest in the non-profit association hospitals which had 39 annual admissions per patient in the hospital on the average day. The rate was extremely low for the federal hospitals which had only 1 admission annually for each occupied bed. It is evident from the accompanying table that patients stay longest in

the governmental general hospitals and have the shortest periods of hospitalization in the hospitals operated by the non-profit organizations (Table 7),

Standards of Service

This report deals with those hospitals which appear in the register of hospitals published by the American Medical Association. From that register has been screened out certain institutions which operate as hospitals but are unregistered because they are not properly equipped, or staffed or because of practices considered unethical. The American College of Surgeons also has an approval program. That body sets up standards for approval that are considerably higher than those for registration by the AMA. An institution must meet certain minimum standards before it is approved. These standards include the following specifications:^{1/}

1. That the physicians and surgeons who are privileged to practice in the hospital must be organized into a definite medical staff.
2. That membership on the medical staff must be restricted to medical doctors who are graduates of approved medical schools, who are in good standing in the profession, who are legally licensed to practice in the state in their respective fields, and who do not engage in unethical practices.
3. That the medical staff must work under stated rules, regulations and policies governing the professional work of the hospital. Medical staff meetings are required at least once a month.
4. That accurate and complete records must be made and kept for each patient.
5. That diagnostic and therapeutic facilities must be available and under competent medical supervision. Minimum requirements must include a clinical laboratory and an X-ray department providing specified services.

Of the 173 general and special hospitals registered in Ohio in 1943 a total of 90 or a little more than one-half were approved by the American College of Surgeons as meeting unconditionally its minimum standards. All but 3 of the large hospitals having 200 and more beds were approved, and all but 6 of those having from 100 to 200 beds. On the other hand, of the 20 hospitals having less than 25 beds only 1 was approved. Of those (38) having from 25-49 beds only 8 were approved. Of the 43 with from 50-99 beds only 18 were approved. From this it is evident that the smaller hospitals largely in the more rural areas have great difficulty in meeting standards for approval. Here is a crucial problem of rural hospital planning (Table 8).

It was found that while the approved hospitals comprised only 52.0 percent of all registered general and special institutions they contained 81.1 percent of the combined bed capacity and received 85.3 percent of all patients admitted to the general and special institutions in 1943.

^{1/} American College of Surgeons 1942-1943 Yearbook. Chicago, 1942.

TABLE 8. REGISTERED GENERAL AND SPECIAL HOSPITALS
BY SIZE, AND QUALITY OF SERVICE, OHIO, 1943

Size	All Hospitals	Approved by ACS	Not Approved by ACS
All hospitals	173	90	83
Less than 25 beds	20	1	19
25 - 49 beds	38	8	30
50 - 99 beds	43	18	25
100-199 beds	33	27	6
200 and more beds	39	36	3

Source: Journal American Medical Association, Hospital Number, Volume 124, No. 13, March 1944, Pages 839 - 922.

Distribution of General and Special Hospital Beds

Of the 23,191 beds in general and special hospitals registered in Ohio 18,740 were in one or another of the metropolitan districts as defined by the United States Bureau of the Census. Each of these districts includes a central city of 50,000 or more population and the immediately adjacent areas having more than 150 people per square mile. There are 12 such districts lying wholly or partly within the boundaries of Ohio. These metropolitan districts had 57.5 percent of the population of Ohio according to the 1940 census but they had 80.8 percent of all beds in general and special hospitals registered by the AMA. On the other hand, while 42.5 percent of the population resided outside the metropolitan areas, only 19.2 percent of all the general and special hospital beds were similarly located (Table 9).

Beds in general and special hospitals approved by the American College of Surgeons were even more concentrated in the metropolitan areas. A little more than 89 percent of all approved beds were in the metropolitan districts. The rest of the State with 42.5 percent of the population had only 10.7 percent of the approved beds.

There are 27 Ohio counties with a combined population of 638,651 which have no general hospital registered by the AMA. Only a few of these counties have any hospital at all (Figure 1).

One-half of the counties without registered general hospitals were in the southeastern section of Ohio. The other half are mostly in the western part of the State, several of them in areas where economic conditions are most favorable. Some of these counties are adjacent to one or another of the metropolitan counties which have large medical centers. Most of them are, however, rather far removed from any hospital approved by the American College of Surgeons.

While there are 27 Ohio counties without any registered hospital, there are 62 without any general hospital which meets the American College of Surgeons' standards for approval. Of all of southeastern Ohio only Belmont, Gallia, and Jefferson counties have any approved hospital (Figure 2).

TABLE 9. REGISTERED GENERAL AND SPECIAL HOSPITAL BEDS
ACCORDING TO LOCATION WITHIN THE METROPOLITAN DISTRICTS OF OHIO 1943

District	Beds			Beds per 1,000 population 1/		
	All Hospitals	Approved	Not Approved	All Hospitals	Approved	Not Approved
Ohio	23,191	18,799	4,392	3.4	2.7	.6
Cleveland	5,716	5,535	181	4.7	4.6	.1
Cincinnati	3,692	2,872	820	5.9	4.6	1.3
Columbus	1,626	1,550	76	4.4	4.2	0.2
Akron	1,152	748	404	3.3	2.1	1.2
Toledo	1,737	1,578	159	5.1	4.6	.5
Youngstown	1,226	1,038	188	3.8	3.2	.6
Dayton	2,063 ^{a/}	2,063 ^{a/}	--	7.6 ^{a/}	7.6 ^{a/}	.0
Canton	520	520	--	2.6	2.6	.0
Hamilton-Middletown	485	485	--	4.3	4.3	.0
Springfield	258	258	--	3.3	3.3	.0
Wheeling (Ohio part)	140	140	--	2.3	2.3	.0
Huntington-Ashland (Ohio part)	125	--	125	4.1	.0	4.1
Total 12 areas	18,740	16,787	1,953	4.7	4.2	.5
All other areas	4,451	2,012	2,439	1.5	.7	.8

Source: Sixteenth Census of the United States, 1940 and Journal American Medical Association. Hospital Number. Volume 124, No. 13. March 1944.
Pages 839 - 922.

^{a/} Includes 1,063 beds in the National Military Home, a U. S. Veterans Administration Facility.

1/ Population by Districts: Ohio-6,907,612, Cleveland-1,214,943, Cincinnati-623,138, Columbus-365,796, Akron-349,705, Toledo-341,663, Youngstown-322,062, Dayton-271,513, Canton-200,352, Hamilton-Middletown-112,686, Springfield-77,406, Wheeling (Ohio part)-60,313, Huntington-Ashland (Ohio part)-30,500, Total 12 areas-3,970,077, All other areas-2,937,535.

Population--bed ratios. It is difficult to determine precisely how many general and special hospital beds are needed to serve the needs of a given unit of population. There are several factors which influence the extent to which people of an area will use hospitals. These include distance between homes and hospitals, the health education and health habits of the people, the ability to pay for health services, and upon physicians' methods of care and their attitudes toward hospitalization.

A recent estimate by United States Public Health Service Authorities indicates a standard of 4.5 general hospital beds are needed for each 1,000 urban people, and 3.0 beds for each 1,000 rural people.

Adequacy of hospital services depends not only upon overall ratios of beds to population but also upon how well the available beds are distributed with relation to population, and upon the distance patients can safely travel to hospitals. Some authorities consider that 40 or 50 miles is not too far for most patients to travel where roads are good and where adequate ambulance service is available. Others recommend shorter distances. The modern conception of hospitals as community health centers emphasizes the importance of having them near at hand. In any case studies in Ohio seem to show that utilization of hospital facilities depends to a considerable degree upon nearness to the hospital.

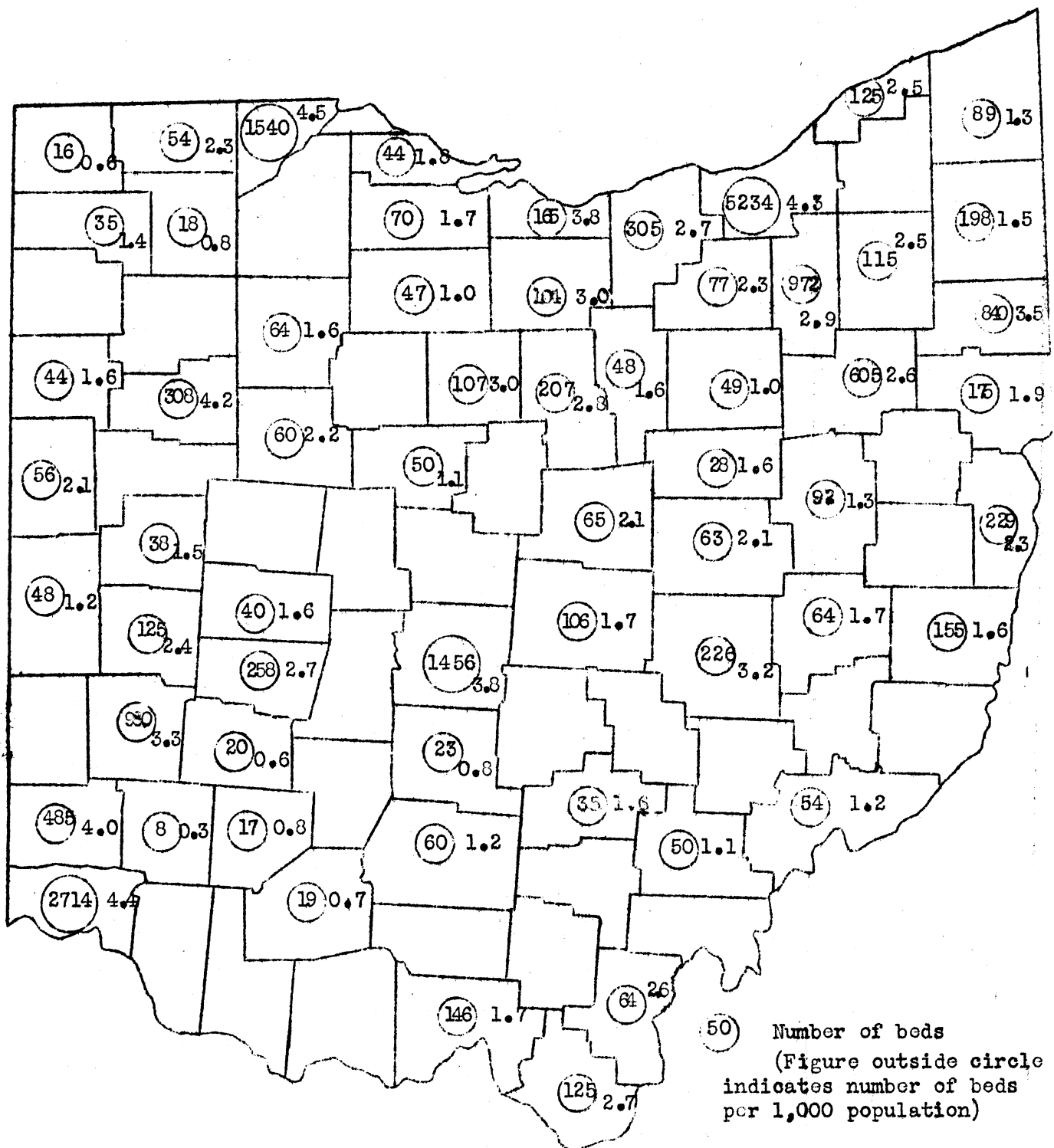


FIG. 1. DISTRIBUTION OF BEDS IN GENERAL HOSPITALS
REGISTERED BY THE AMERICAN MEDICAL ASSOCIATION, OHIO 1943
(DOES NOT INCLUDE FEDERAL GOVERNMENT HOSPITAL)

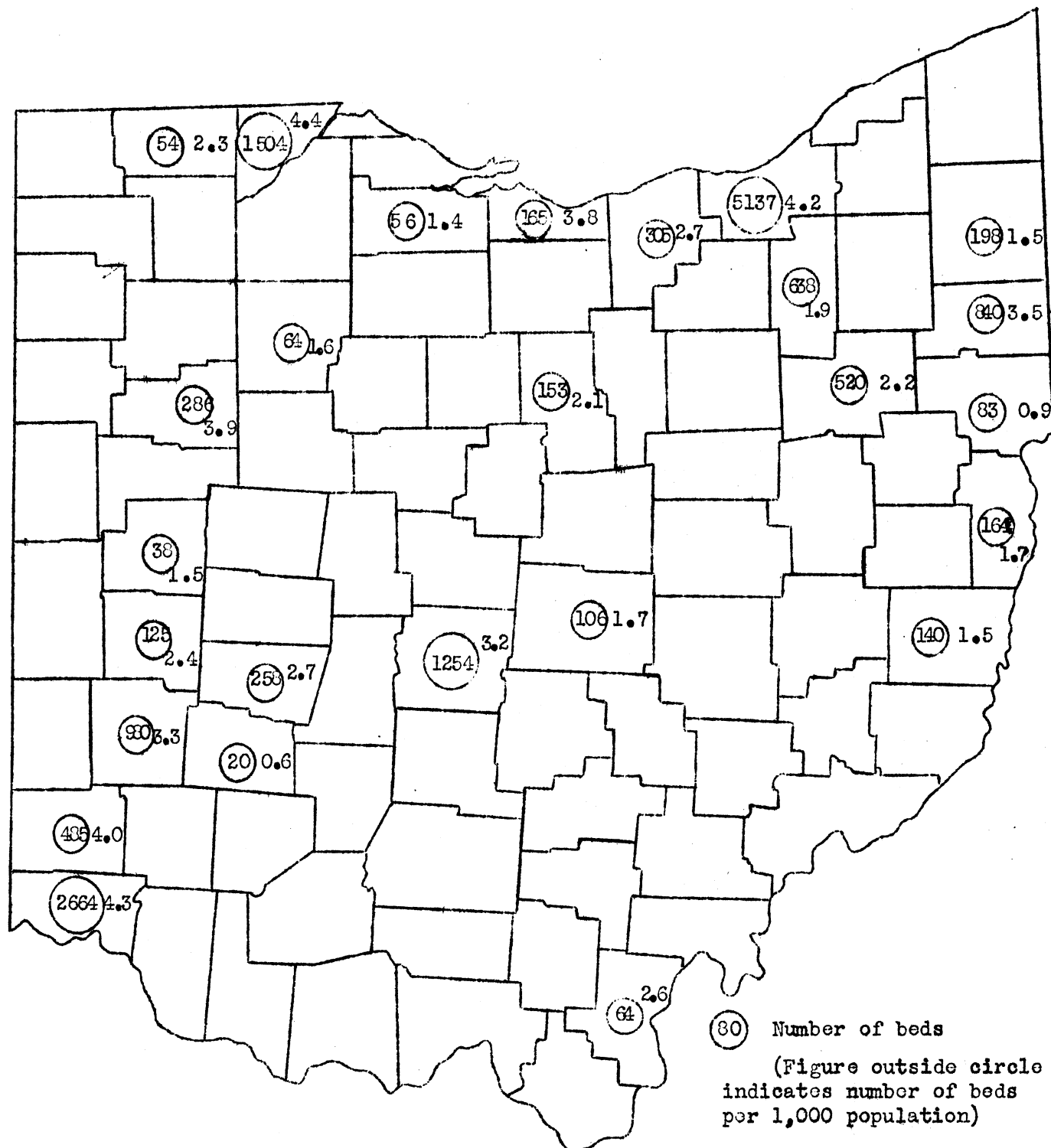


FIG. 2. DISTRIBUTION OF BEDS IN GENERAL HOSPITALS APPROVED BY
THE AMERICAN COLLEGE OF SURGEONS, OHIO 1943
(DOES NOT INCLUDE FEDERAL GOVERNMENT HOSPITAL)

If 4.5 beds per 1,000 population be taken as a standard for the metropolitan areas of Ohio then only those areas centering in Cleveland, Cincinnati and Toledo come up to that standard. ^{1/} This is true even when the computations are based on the 1940 census of population and to the population actually within the metropolitan districts. It is likely that the populations of these areas have increased since 1940. It is also true that patients from outside these districts seek admission to their hospitals.

In all metropolitan districts combined there were 4.7 beds in registered general and special hospitals for each 1,000 of the 1940 population of those districts. In these urban districts there were 4.2 approved beds per 1,000 population. In striking contrast was the remainder of the State which had only 1.5 beds in registered hospitals per 1,000 of the general population, and which had only about 1 bed in approved hospitals for each 1,500 of the 1940 population. Nearly 90 percent of all those beds in the metropolitan areas were in approved hospitals. In contrast, less than one-half of those outside these areas were in hospitals approved by the American College of Surgeons (Table 9). From this it is evident that the rural hospitals provide a different quality of service than do those in the large urban centers.

When counties were taken as units for computing the number of general hospital beds per 1,000 population, the results are revealing. Of the 61 counties which had one or more registered general hospitals, 7 had less than 1 bed per 1,000 people, and 32 had less than 2 beds per 1,000, and 49 had less than 3 beds per 1,000. In other words, of the 88 counties 76 had no registered hospital beds or less than 3 beds per 1,000 population, while only 12 counties had 3 or more registered hospital beds per 1,000 people.

Of the 26 counties which had one or more approved hospitals 17 had less than 3 approved beds per 1,000 people (Table 10).

TABLE 10. COUNTIES CLASSIFIED BY THE NUMBER OF BEDS
IN REGISTERED AND IN APPROVED HOSPITALS PER 1,000 POPULATION

Beds per 1,000 population	Registered Hospitals	Approved Hospitals
All counties	88	88
No hospital beds	27	62
Less than one bed	7	1
1.0 - 1.9 beds	25	9
2.0 - 2.9 beds	17	7
3.0 - 3.9 beds	7	5
4.0 - 4.9 beds	5	4

^{1/} The Dayton district had 7.6 beds per 1,000 of the 1940 population but one-half of those beds were in the National Military Home, a veterans' administration facility and not available to the general public.

IV GENERAL HOSPITAL SERVICE AREAS

For purposes of describing hospital facilities and patients in relation to population some geographic unit must be used as the population base. A satisfactory base is difficult to establish since general and special hospitals usually attract patients from surrounding zones without respect to political boundaries such as counties, cities, townships or other established units.

In order to overcome somewhat the obvious limitations involved in using counties as rural hospital units an attempt was made to outline units of territory which would more nearly approximate real hospital service areas as they now exist. For each of the smaller cities where a registered general hospital was located the local newspapers were examined to discover whether they printed daily or weekly hospital news. Many such newspapers, it was found, did regularly carry news reports showing the names and addresses of patients admitted to, or discharged from the local hospitals. Others which did not carry hospital news did report the names and addresses of parents of babies born in the local hospitals.

By listing these addresses of patients over a long period of time and then spotting them on a large map of Ohio, it was possible to determine roughly the zone surrounding each hospital from which most of its patients came. Township boundaries were then followed in mapping out approximations to hospital service areas. No attempt was made to spot addresses of patients admitted to the hospitals in the large metropolitan centers. The large metropolitan service areas were, however, delineated indirectly by the "closing in" process involved in outlining surrounding areas. In many instances service areas of hospitals in places fairly close to each other were obviously overlapping. In such cases no attempt was made to outline separate areas. For example, all of northeastern Ohio was considered one large hospital service area even though there were hospitals located in 19 different cities within the area. A similar situation was found in the southwestern part of the State.

Using the above method Ohio was tentatively divided into 6 major areas, two of which were predominantly rural and which consisted of 22 subareas each having one or more hospitals (Figure 3 and Appendix table 1). The major areas were designated Northeastern, Southwestern, Central, Toledo, Northwestern, and Southeastern.

Northeastern Area

The Northeastern area included the metropolitan districts of Cleveland, Akron, Canton and Youngstown. That area contained 8,601 registered general hospital beds or 44.1 percent of all such beds in the State. It had, however, only 3.3 beds per 1,000 population. Nearly 78 percent of all beds were occupied on the average day of 1943 (Table 11).

Southwestern Area

The Southwestern area as delineated included the metropolitan centers of Cincinnati, Dayton, Hamilton, Middletown, and Springfield. It had 23 registered general hospitals with 4,695 beds. That was 3.4 beds per 1,000 population based on the last census (Table 11).

Central Area

The Central hospital area included that part of central Ohio around Columbus.

It included the subareas of Circleville, Mt. Vernon, and Newark. This area as a whole contained only 10 registered general hospitals with a combined capacity of 1,650. That was only 2.5 beds per 1,000 people in the area in 1940 (Table 11).

TABLE 11. REGISTERED GENERAL HOSPITALS^{1/} BY MAJOR AREAS, OHIO 1943

Major Area	Number of Hospitals	Beds		Average Census	
		Number	Per 1,000 Population	Beds Occupied	Percent of Beds Occupied
All Areas	143	19,514	2.8	15,189	77.8
Northeastern	47	8,601	3.3	6,687	77.7
Southwestern	23	4,695	3.4	3,702	78.8
Central	10	1,650	2.5	1,356	82.2
Toledo	8	1,540	3.9	1,220	79.2
Northwestern	31	1,535	1.9	1,157	75.4
Southeastern	24	1,493	1.4	1,047	70.1

Major Area	Admissions		Patient Turnover Rate ^{2/}	Births	
	Number	Per 1,000 Population		Number	Per 100 Admissions
All Areas	544,535	78.8	35.9	107,007	19.7
Northeastern	235,633	90.6	35.2	45,413	19.3
Southwestern	131,404	94.0	35.5	25,481	19.4
Central	44,453	67.3	32.8	7,863	17.7
Toledo	42,118	107.3	34.5	6,852	16.3
Northwestern	47,397	57.6	41.0	11,773	24.8
Southeastern	43,530	42.1	41.6	9,625	22.1

Source: Appendix Table 1

^{1/} Does not include those hospitals operated by the federal government.

^{2/} Number of annual admissions per occupied bed.

Toledo Area

The Toledo hospital area as outlined included the central city, Lucas County and parts of each adjoining county. All of the hospitals, 8 in number, were located in the central city of Toledo. The beds in these institutions numbered 1,540 which was 3.9 per 1,000 population (Table 11, Figure 3).

These 4 areas include the metropolitan centers of Ohio and surrounding territories. Together they contain about 73 percent of the population of Ohio and a little more than 84 percent of all general hospital beds in the State.

Northwestern Area

The Northwestern area included all that part of northern and western Ohio lying outside the immediate localities of the large metropolitan centers. Its largest hospital centers are Lima, Mansfield and Sandusky. The areas as a whole had only 1,535 registered general hospital beds. That was only 1.9 beds per 1,000 population. The beds were 75.4 percent filled on the average day, and 24.8 percent of the admissions were maternity patients, a higher proportion of maternity patients than in any other major area.

This area has 12 subareas. In these the number of beds per 1,000 population ranged from about 1 in the Kenton area to 2.4 in the Lima area (Appendix Table 1, Fig. 3).

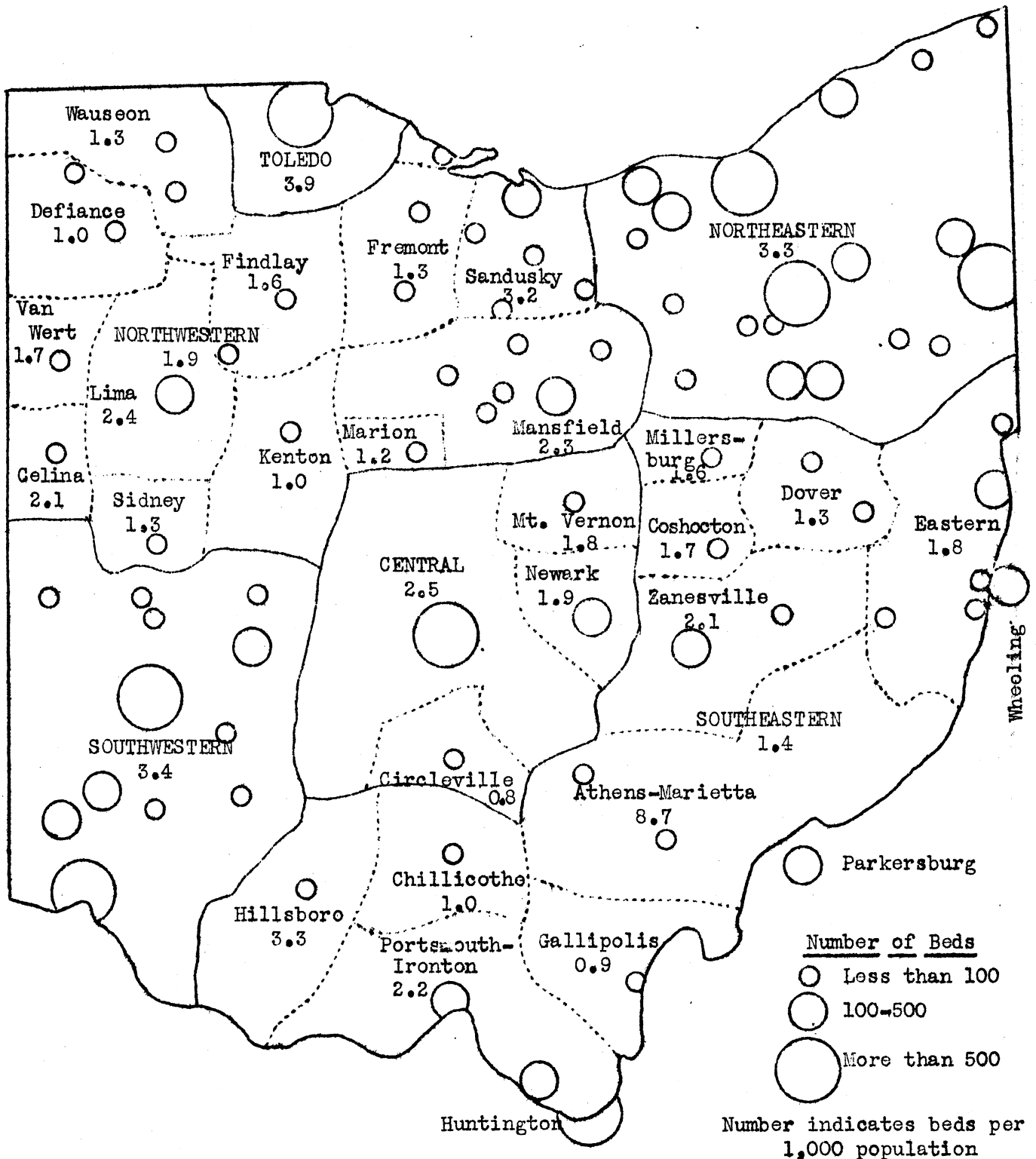


FIG. 3. REGISTERED GENERAL HOSPITAL BEDS IN HOSPITAL AREAS OF OHIO 1943

Southeastern Area

The Southeastern area included all of southeastern Ohio. The whole area had only 24 registered general hospitals with 1,493 beds. That was only 1.4 beds per 1,000 people. A little more than 70 percent of the beds were reported occupied on the average day.

There are three large hospital centers adjacent to this area in another state. These are the centers of Wheeling, Parkersburg, and Huntington, West Virginia. It is likely that many Ohioans utilize services in the out-of-state hospitals.

The Southeastern area includes 10 subareas. In these the number of beds per 1,000 population ranged from 0.3 in the Hillsboro area to 2.2 in the Portsmouth area (Appendix Table 1, Fig. 3).

Patients Admitted

In 1943 about 79 patients were admitted to general hospitals in Ohio for each 1,000 population. This does not include admissions to veterans, or to Army or Navy hospitals, nor to maternity, childrens or other special hospitals.

In the 6 major areas this admission rate was closely related to the number of beds available for use, and ranged from 42 per 1,000 in Southeastern Ohio to 107 per 1,000 in the Toledo area (Table 11).

Patient Turnover

Patient turnover in hospitals is measured by the number of annual admissions per bed occupied on the average day. In 1943 there were 36 patients admitted to the general hospitals for each bed, that is, one bed is used on the average by 36 patients during the course of a year. This ratio is a reflection of the length of time patients stay in hospitals, a low figure indicating a long stay and a high figure a short average stay.

The turnover rate varied considerably in the different major areas, ranging from 33 in the Central area to 42 in the Southeastern area (Table 11).

Maternity Cases

A total of 107,007 births occurred in the general hospitals of Ohio in 1943. Those births equaled 19.7 percent of all admissions, an indication that about one-fifth of all admissions were maternity patients. This ratio of births in hospitals to patients admitted ranged from 16.3 percent in the Toledo area to 24.8 percent in the northwestern area (Table 11).

V PLANNING GENERAL HOSPITALS FOR RURAL PEOPLE

As this report has shown hospital services are not available to rural people on the same basis as they are to urban people in the larger cities. The rural areas have fewer general hospital beds per 1,000 population, and many rural families live in localities that are rather far removed from any hospital. Many rural areas that do have some hospital service near at hand do not have it in the same quality as do residents of the large cities. Some rural hospitals do not meet even the comparatively simple requirements for registration by the American Medical Association, and only about 1 in each 6 small hospitals with less than 50 beds are able to meet the minimum requirements for approval by the American College of Surgeons.

If the best of modern medical care and health services are to be made available to rural people, it seems clear that hospitals must play a very important part in the achievement of that purpose. Realizing that fact, rural people are considering ways and means by which they can gain easier access to the best hospital services. In several rural counties plans are already underway for hospital building programs in the postwar period. There is need for the most careful planning for future extension of hospital facilities if they are to meet rural needs in the post-war world. Such planning is required not only at local levels but also at district, state, regional and national levels as well.

It is not the purpose of this report to consider the matter of detailed planning of hospitals for rural people. Certain general assumptions for planning may, however, be stated. These assumptions are being made rather generally among those authorities who are giving the most careful thought to rural hospital, medical, and health needs. They may, therefore, be taken as guideposts for future hospital planning.

1. Hospitals should be developed to serve as local medical and health centers.

An older assumption was that where a large urban hospital or medical center exists no other hospital should be built within a radius of 50 miles of that center, particularly if good roads and good ambulance services are available for transporting patients. That assumption is now pretty thoroughly discredited. It was based on the thought that the hospital was to serve primarily as a workshop for medical doctors and as a hotel for sick people in need of bed services.

The newer conception of the hospital is that of a community medical and health center. Such a center serves to link and coordinate local medical and health services, and it serves to improve the quality of medical care in the local area. A well equipped and well organized rural hospital provides laboratory and diagnostic facilities to be used by local physicians in the diagnosis and treatment of all the people of the locality as well as the relatively few who require hospitalization.

Such a local hospital should serve to attract young and well trained physicians to the more rural areas, and should encourage good doctors to remain in country practice. It should, if properly operated, give rural people a better understanding of modern medical care and its possibilities for human welfare. It would encourage greater utilization of hospital beds by rural people who need hospitalization but who may refuse to go to a distant hospital where they would be out of touch with their family, their friends, and with their family doctor.

2. Rural hospitals should be developed as integral links in a regional system of hospitals.

It is doubtful whether local hospitals outside the larger centers of population can best serve the needs of rural people so long as they remain isolated from other health services and from other hospitals. One of the most significant proposals now under consideration by hospital planners is that the present unorganized aggregation of general hospitals be organized on regional bases. Under such a system, the smaller rural hospitals or medical centers would have very definite service relations with larger and more adequately staffed hospitals in the big urban centers. The specialists' service available at the larger medical centers would be extended out to the outlying rural institutions. Specialists in pathology, in radiology and in the many medical specialties would be made available to visit the outlying hospitals to see certain patients and to consult with local physicians regarding their most difficult cases.

The rural hospitals or medical centers, in turn might have close service relations with smaller public health centers in sparsely settled rural areas which could not afford a hospital of their own. Such a regional system of medical centers would include the following types of centers according to size and completeness of services.

- a. Large base hospitals. Such a hospital preferably would be one which serves as a teaching unit of a medical school. It would be a center that provides all types of hospital services including complete diagnostic, therapeutic, teaching, and research facilities.

In Ohio such hospitals are found in the three cities of Cleveland, Columbus, and Cincinnati, each of which is the site of a university medical school.

- b. District hospitals. Such hospitals would probably be smaller than the base hospitals but would provide all types of hospital services including complete diagnostic facilities and would provide for the instruction of interns, technicians, nurses, and hospital dietitians. In Ohio such hospitals would be found in most of the centers with 40,000 or more population.
- c. Rural hospitals. Rural hospitals would be those located in the smaller cities and therefore closely accessible to rural people. They would provide laboratory and X-ray services which might be supervised by pathologists and radiologists from the larger centers. These hospitals or rural medical centers would also provide at least minor and emergency surgery, obstetrical and medical services. The more difficult cases would, however, be sent to the larger and more adequately equipped and staffed medical center at the district or regional level.

The rural hospital might well serve as the community medical and health center by providing office space for local doctors and dentists and by housing the local public health department.

- d. Public health centers. In the more sparsely settled rural areas where a rural hospital would not be feasible the public health unit might be expanded and augmented to provide a public health center. Such a center would provide a few beds for maternity service and emergency surgery. It would also provide laboratory and limited X-ray service supervised

by visiting pathologists and radiologists as in the rural hospital. Local doctors and dentists as well as the health department personnel would be housed in this small facility.

3. The costs of hospital services should be financed through a prepayment plan.

The principle of prepayment is now generally accepted in this country, and is now well known in practice as a result of the Blue Cross plans sponsored by the American Hospital Association. Such plans should be adopted and expanded to include rural people as well as employed urban groups. Prepayment plans should also be expanded to cover the costs of medical, surgical and obstetrical as well as hospital services.

4. Health education. In order to get increased utilization of hospital services rural people need to be better informed as to the nature of modern medical care and health services. In particular there is need to provide more information to rural people regarding the functions of the modern hospital and its role in the distribution of medical care and health services.

5. Hospital planning for rural people should be based on research.

This report is based on research which only provides an approach to that needed as a basis for hospital planning in line with the principles indicated above. Such research is needed to determine the logical boundaries of regions, districts, and local areas for hospital service within Ohio and where new hospitals should be constructed or where existing facilities should be expanded, maintained, or abandoned. For each hospital service area or sub-area information should be compiled regarding the population and geographic factors, economic status, health status, medical and related personnel, medical care practices, utilization of existing facilities, and methods of payment for hospital care.

The American Hospital Association through its Committee on Post-war Planning has already set up an independent, non-political, public service group known as the Commission on Hospital Care. That Commission is now engaged in a study of present facilities, practices, policies, and programs of hospitals of all types in Michigan and in one or two other states. The Commission is expected to suggest general plans for the further development and coordination of hospital services.

A similar agency should be established for Ohio. The objectives would be:

- a. To survey in detail through field contacts, the existing hospital and health center facilities in the State.
- b. To make an authoritative appraisal of hospital and health center needs in Ohio.
- c. To draft an over-all state hospital plan.

APPENDIX TABLE 1. REGISTERED GENERAL HOSPITALS^{1/}

BY AREAS, OHIO 1943

Area	Number of Hospitals	Beds		Average Census		Admissions		Patient Turnover Rate ^{2/}	Births	
		Number	Per 10,000 Population	Beds Occupied	Percent Occupied	Number	Per 1,000 Population		Number	Per 100 Admissions
Ohio	143	19,514	28.2	15,189	77.8	544,535	78.8	35.9	107,007	19.7
Northeastern	47	8,601	33.1	6,687	77.7	235,633	90.6	35.2	45,413	19.3
Southwestern	23	4,695	33.6	3,702	78.8	131,404	94.0	35.5	25,481	19.4
Central	10	1,650	25.0	1,356	82.2	44,453	67.3	32.8	7,863	17.7
Columbus	7	1,456	32.2	1,212	83.2	38,242	84.7	31.6	6,378	16.7
Nowark	1	106	19.2	83	83.0	4,016	72.8	45.6	833	20.7
Mt. Vernon	1	65	18.1	45	69.2	1,610	45.0	35.8	430	26.7
Circleville	1	23	8.0	11	47.8	585	20.4	53.2	222	37.9
Toledo	8	1,540	39.2	1,220	79.2	42,118	107.3	34.5	6,852	16.3
Northwestern	31	1,535	18.7	1,157	75.4	47,397	57.6	41.0	11,773	24.8
Mansfield	6	362	23.0	234	64.6	10,677	67.8	45.6	2,744	25.7
Lima	2	286	24.3	265	92.7	9,136	77.7	34.5	1,746	19.1
Sandusky	7	313	31.7	213	68.1	7,517	76.0	35.3	1,827	24.3
Fremont	3	117	13.2	96	82.1	4,260	48.0	44.4	1,147	26.9
Findlay	2	86	15.9	68	79.1	2,997	44.0	44.1	879	29.3
Kenton	2	60	9.7	44	73.3	1,390	22.4	31.6	298	21.4
Wauseon	2	72	13.2	46	63.9	2,231	41.0	48.5	428	19.2
Defiance	2	51	10.4	34	66.7	1,963	38.7	57.7	619	31.5
Marion	1	50	12.0	53	106.0	2,594	51.1	48.9	872	33.6
Sidney	1	38	12.5	36	94.7	1,587	52.1	44.1	371	23.4
Colina	2	56	21.3	33	58.9	1,786	68.0	54.1	506	28.3
Van Wert	1	44	17.3	35	79.5	1,259	50.0	36.0	336	26.7
Southeastern	24	1,493	14.4	1,047	70.1	43,530	42.1	41.6	9,625	22.1
Eastern	6	467	17.5	411	88.0	16,412	61.3	39.9	3,554	21.7

See footnotes at end of table.

APPENDIX TABLE 1. REGISTERED GENERAL HOSPITALS 1/

BY AREAS, OHIO 1943--CONTINUED										
Area	Number of Hospitals	Beds		Average Census		Admissions		Patient Turnover Rate <u>2/</u>	Births	
		Number	Per 10,000 Population	Beds Occupied	Percent Occupied	Number	Per 1,000 Population		Number	Per 100 Admissions
Athens	3	139	8.7	74	53.2	3,261	20.3	44.1	611	18.7
Portsmouth	4	271	22.0	165	60.9	8,077	51.4	49.0	1,597	19.8
Zanesville	4	290	21.0	183	63.1	6,605	48.5	36.4	1,589	23.8
Gallipolis	1	64	9.1	49	76.6	2,400	34.1	49.0	299	12.5
Dover	2	92	13.4	79	85.9	2,705	39.5	34.2	944	34.9
Chillicothe	1	60	10.0	31	51.7	858	14.3	27.7	290	33.8
Hillsboro	1	19	3.3	9	47.4	520	9.0	57.8	135	26.0
Coshocton	1	63	17.2	32	50.8	1,872	51.0	58.5	452	24.1
Millersburg	1	28	15.7	14	50.0	759	42.5	54.2	154	20.3

1/ Does not include those hospitals operated by the federal government.

2/ Number of annual admissions per occupied bed.